

Appl. No. 09/742,177
Amdt. Dated September 7, 2004
Reply to Office action of June 7, 2004
Attorney Docket No. P12670-US1
EUS/J/P/04-4004

REMARKS/ARGUMENTS

Claim Amendments

The Applicant has amended claims 1, 4, 10, and 12-16. Claims 3 and 22-28 have been canceled. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-2 and 4-21 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Claim Rejections – 35 U.S.C. § 102(e)

Claims 1, 5-10, 12-14 and 16-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Tanaka, et al. (US 6,633,538 B1 hereinafter Tanaka). The Applicant respectfully traverses the rejection of these claims. The Applicant has amended claims 1, 10 and 16 to better define the intended scope of the claimed invention.

The Applicant's invention automatically designates and re-designates node status for queue handling. Master nodes are designated according to IP address without interruption of the queuing capabilities of the network. In one embodiment as one or more nodes are removed from the network it is automatically determined whether the removed node had the highest IP address on the network. If a slave node has departed the network, no further action is taken. If a master node disconnects from the network, i.e., the highest IP-addressed node in the network, all remaining network nodes are examined to determine the highest IP address. Out of the group of remaining nodes, the highest IP-addressed node is automatically designated the master node. The backup master queue in the newly designated master node becomes the new master queue and the slave nodes retain backup copies of the master queue. (Figure 6 description)

1. (Currently Amended) In an Internet Protocol (IP) network having a plurality of nodes, a method of dynamically designating a queue-responsible, master node comprising the steps of:
 - (a) determining the IP addresses of said plurality of nodes;
 - (b) ranking the IP addresses of said plurality of nodes;

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(c) determining whether a master node is installed and if not, automatically designating the node with the highest IP address as the master node;

(d) designating all other nodes as slave nodes; and

(e) maintaining the queue positions of all nodes in the network in a master queue at said master node. (emphasis added)

The Tanaka reference appears to disclose a node representation system that utilizes an address management table. Entries in the table are inter related in that adjoining entries monitor each other. When a node fails, the master node is able to easily duplicate the resource of the master node on each slave node. Tanaka uses real and virtual addresses and IP addresses are noted as representative addresses.

Applicant's amended claim 1 combination recites, among other features, utilizing IP addresses in a similar manner as Tanaka. However, the Applicant determines IP addresses of the connected nodes and then designates the highest-ranking IP address as the Master node. The invention monitors the connected nodes and when the master node is disconnected a ranking of the connected nodes is determined. The highest ranking node is then used as the master node. This step is neither taught nor suggested by Tanaka.

For the above reasons, Tanaka fails to teach or suggest all of the subject matter of amended claim 1. As between claim 1 and the Tanaka reference, the Applicant submits that amended independent claims 12 and 16 contain limitations analogous to those found in claim 1. Claims 5-10, 13-14 and 17-21 depend from claims 1, 12 and 16 respectively and contain the same limitations. As such the Applicant respectfully requests withdrawal of the rejection of claims 1, 5-10, 12-14 and 16-21.

Claim Rejections – 35 U.S.C. § 103 (a)

Claims 2-4 and 22-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Aziz, et al. (US 6,597,956 B1 hereinafter Aziz). In order to expedite allowance of this application, the Applicant has canceled claims 3 and 22-28 without prejudice. Therefore, the rejection with respect to claims 3 and 22-28 is

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deemed to be moot. The Applicant respectfully traverses the rejection of the remaining subject claims.

The Aziz reference is cited for controlling clusters through a master-slave relationship and for utilizing IP addresses to designate the master and slaves. In the Official Action, a correspondence is drawn between this claimed feature and the description of managing segments found on col 16, lines 27-35 of Aziz. However, the Applicant has reviewed this cited portion of Aziz and finds no reference to utilizing IP addresses. Instead, the cited portion indicates utilizing election sequence numbers to determine a master segment manager in server farm in a computing system. In column 16 lines 27-35, "...an election sequence number is assigned to all active slave segment managers and a new master segment manager is determined based upon the election sequence numbers for the active slave segment managers." There is no reference to IP addresses in Aziz, nor a suggestion that IP addresses may be used. The Applicant respectfully requests withdrawal of the rejection of claims 2 and 4.

Claims 11 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Kang, et al. (US 6,65,474 B2 hereinafter Kang). The Applicant respectfully traverses the rejection of claims 11 and 15.

The Kang reference appears to disclose a node ID allocating system using a logic tree. Kang, in column 6, lines 2-20, is cited as disclosing deleting queue positions of disconnected nodes from a master queue. The cited portion describes adjacent devices on the system signaling the root device that a particular device has been disconnected. The root device then broadcasts a message containing the ID of the disconnected device to the rest of the connected devices. After receiving the message, the rest of the devices close off communication with the disconnected device.

Queuing is generally defined as holding a sequence of messages or tasks in storage awaiting transmission or processing. The Applicant's invention basically deletes queue positions of disconnected nodes from the master queue. In Kang, the node ID of the missing device is broadcast to the remaining devices. Queuing is not taught or

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suggested by Kang. The Applicant therefore, requests the withdrawal of the rejection of claims 11 and 15.

Prior Art Not Relied Upon

In paragraph 6 page 10 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure.


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CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,


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